

## ABSTRACT

Title of Thesis: IMMIGRATION AND NEIGHBORHOOD  
CRIME: THE MODERATING INFLUENCE  
OF CITY LABOR INSTABILITY

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The bulk of extant work finds that immigrant prevalence helps to reduce neighborhood levels of serious crime. These findings align with the “immigrant revitalization thesis” in which states that immigration reduces crime by strengthening social ties and attendant social controls as well as stimulating the local economy. Also, a city’s conditions are shown to be a substantial moderator for the immigration-crime nexus. Thus, this study tests whether labor instability at the city level shapes the immigration-crime relationship, and whether this interaction differs by gateway status. Using the National Neighborhood Crime Study (NNCS) which provides information on crime as well as demographics for 87 cities across 8,931 neighborhoods, I fit multilevel models for violent and property crime, and for gateway and non-gateway cities. This paper finds that in cities with a higher level of labor instability, immigrant prevalence is associated with reductions in neighborhood level of violent crime, but not property crime. This interaction effect is significant for violent crime regardless of cities’ gateway status but not for property crime.

IMMIGRATION AND NEIGHBORHOOD CRIME: THE MODERATING  
INFLUENCE OF CITY LABOR INSTABILITY

by

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## Chapter 1: Introduction

The nexus between immigration and violent crime has been extensively examined, and the most recent assessment has shown that immigration does not affect or is inversely related to neighborhood crime (Ousey & Kubrin, 2018). For example, Akins and his colleagues (2009) found that in Austin, Texas, recent immigrants had no significant effect on the neighborhood homicide rate. Graif and Sampson (2009) also found that immigrant concentration yielded no impact on the neighborhood homicide rate in Chicago. On the other hand, other recent studies demonstrated that higher concentration of immigrants is related to lower levels of neighborhood homicide and violent crime (Feldmeyer, 2009; Kubrin & Ishizawa, 2012; Lee et al., 2001; Lee & Martinez, 2002; MacDonald & Hipp, 2013, Stowell & Martinez, 2009; Velez, 2009). To explain this protective influence of immigration on neighborhood crime, scholars draw on the "immigrant revitalization perspective." This line of thinking argues that immigration is expected to reduce crime mostly because the concentration of immigrants strengthens social ties and attendant social controls, as well as stimulates economic growth, and these benefits lead to reductions in neighborhood crime (Martinez et al., 2010; Ousey & Kubrin, 2018).

Given the pervasive findings of the protective effect of immigration, scholars have called for research that further elucidates this inverse relationship. A promising area of research is embedding the neighborhood relationship of immigration and crime within the city context. Cities are essential because their environments and status may determine neighborhood conditions that keep crime at bay or increase

crime. In particular, previous studies revealed that immigration varies by immigrant political opportunity structures (Lyons et al., 2013) and by gateway status (Harris & Fledmeyer, 2012; Ramey, 2013; Velez & Lyons, 2012). For instance, in cities with favorable immigrant political opportunities, the negative relationship between immigrant concentration and neighborhood violence was reinforced such that immigration was particularly beneficial for warding off neighborhood violence in sanctuary cities (Lyons et al., 2013). Also, researchers found that the beneficial effect of immigrants on crime is limited to gateways, which are ports of entry for immigrants and thus have supportive "contexts of reception" for immigrants (Portes & Rumbaut, 2006; Singer, 2004). This growing body of work indicates that a city's conditions are important in exploring the nexus between immigration and neighborhood crime.

I build on previous studies to explore how another contextual factor at the city level, economic conditions, shapes how immigration relates to crime. Do the protective mechanisms that immigration sets in motion per the revitalization perspective get undercut when it takes place in a struggling city economy? An unsteady city economy is characterized by labor instability, which is measured by the amount of secondary sector low-wage jobs and joblessness. Studies found that job competition in the low-wage jobs market would increase conflicts between immigrants and native minorities and leads to a rise in neighborhood violent crime (Reed & Danziger, 2007; Shihadeh & Barranco, 2010a; Waldinger, 1997). Frictions in the labor market may weaken the social ties among colleagues and between individuals and the workplace, which eventually impair informal social controls.

Informal social control is defined as “the linkage of cohesion and mutual trust with shared expectations for intervening in support of neighborhood social control” (Sampson et al., 1999, p.612). Accordingly, it may be that in cities with labor instability, the benefits of immigration on crime are diminished. Conversely, it is possible that immigration becomes more powerful and more effective in its protective influence against crime when the city is struggling economically. In neighborhoods that have higher immigrant concentration, immigrants are more likely to develop "ethnic enclaves" (Martinez et al., 2010; Sampson, 2008). When the labor market is sluggish, immigrants may become more likely to utilize their social networks, such as relatives and neighbors, to obtain jobs in these ethnic businesses. In this case, immigrants may have broader and protective networks and have better chances to work in "ethnic enclaves." Working, even in low-wage jobs, helps immigrants establish ties with labor markets and boost informal social controls (Crutchfield, 1989). I also explore how the conditioning influence of labor instability on crime may operate differently by a city’s gateway status. Gateways are cities with metropolitan populations greater than one million and a long history of immigrant settlement or that have experienced fast immigrant population growth between 1990 and 2000 (Singer, 2004). Since ethnic enclaves are more likely to bloom in gateway cities (Ousey & Kubrin, 2009), the beneficial effects of immigrants on crime may differ between the gateway and non-gateway cities (Lee & Martinez, 2002; Martinez, 2006; Martinez et al., 2004). Thus, I anticipate city labor instability will moderate the association between immigrants and neighborhood crime, and this moderation effect will only be significant for gateway cities but not for non-gateway cities.

The objective of the current study is to investigate how the relationship between neighborhood immigration and crime is moderated by unfavorable economic conditions in the city, namely when it is characterized by "labor instability," which refers to the presence of low quality and unstable jobs (Crutchfield, 1989; Crutchfield & Pitchford, 1997; Krivo & Peterson, 2004). In addition, I will explore whether the interaction effect between immigration and labor instability varies by the city's gateway status. The National Neighborhood Crime Study (NNCS) is appropriate for conducting multilevel analyses to assess the cross-level moderating effect of cities' labor instability on the immigrant-crime nexus. The data have both the neighborhood level and city level information, and the variables of interest in this study are widely available in the dataset (Peterson & Krivo, 2010a).

Little research has considered the moderating effect of economic conditions on the immigration-crime relationship. Theoretically, economic conditions are important to understand social inequality, concentrated disadvantage, and family structure, and these factors are closely related to neighborhood crime (Peterson & Krivo, 2010a; Vaughn et al., 2014; Wilson, 1987). Even though studies have examined the moderating influence of neighborhood disadvantage, racial segregation, or gentrification (Kreager et al., 2011, Peterson & Krivo, 2010a, Velez, 2009), little of them consider moderating influence of economic conditions. For example, Crutchfield and his colleagues (Unpublished) evaluated how characteristics of the metropolitan labor market moderated the relationship between neighborhood labor instability and crime. They found that neighborhood labor instability positively related to crime in all types of labor markets at the city level. Yet, their study didn't

consider the economic influences of immigrants. Xie and Baumer (2018) also examined whether the relationship between immigrant concentration and violent crime is conditioned on labor market characteristics, and they didn't find any significant moderating effects. However, their indicators of the labor market are not "labor instability," and they are measured at the county level. Given existing research, the purpose of the current study is to fill the gap in the literature to examine how city economic conditions would moderate the association between immigration concentration and neighborhood crime. The results from the analyses will allow us to understand whether the association between immigration and neighborhood crime across various cities, including gateway and non-gateway cities, is influenced by the city's economic status. I go beyond previous assessments by integrating the effect of economic conditions and immigration and by investigating this interaction effect in different city contexts.

## Chapter 2: Conceptual Arguments

### **Immigration and Crime**

In contrast to some theoretical arguments and public beliefs that immigration concentration will increase crime, prior studies reported that immigration concentration does not positively affect neighborhood crime and, in some cases, even negatively relate to crime (Ousey & Kubrin, 2018). Studies showed that immigrant prevalence has no significant relationship with neighborhood crime. Immigrant concentration has no significant effect in predicting neighborhood homicide, and the increasing foreign-born population has no influence on neighborhood violent crime (Akins et al., 2009; Graif & Sampson, 2009; Chavez & Griffiths; 2009). Moreover, for the research that found a statistically significant association between immigration and crime, the majority of the results showed a negative relationship (Ousey & Kubrin, 2018). Neighborhoods with higher immigrant concentration were found to be associated with lower homicide rates and other measures of violent crime (Fledmeyer, 2009; Kubrin & Ishizawa, 2012; Lee et al., 2001; Lee & Martinez, 2002). Also, growth in recent immigrants was only found in stable neighborhoods with a low prevalence of violent crime (Chavez & Griffiths, 2009). Beyond the neighborhood level, cities that historically have a higher number of immigrants or are experiencing a growth in immigrants also found a decline in violent crime (Ousey & Kubrin, 2009; Stowell et al., 2009; Wadsworth, 2010). Ousey and Kubrin (2018) show that despite some limitations on uniformity of measurements and using cross-sectional data, there is a relatively consistent conclusion that immigration has a null effect or a negative relationship with neighborhood crime.

Although there is a vast pool of literature studying the immigration-crime nexus, most examines violent crime while ignoring property crime. Previous research on immigration and crime heavily focused on violent crime, especially homicide (Graif & Sampson, 2009; Martinez, 2002; Martinez et al., 2010), but we know little about the influence of immigration on property crime. However, property crime may be another measurement that indicates immigrants are struggling in the U.S. labor market (Butcher & Piehl, 1998; Hagan and Palloni, 1998). Hagan and Palloni (1998) argued that property crime is an important instrument for immigrants to be financially sufficient to support themselves and establish themselves in America. To illustrate, Kubrin and her colleagues (2018) found that immigrant concentration is not significantly related to violent crime but substantially reduces property crime at the neighborhood level. On the other hand, Peterson and Krivo (2010a) found that immigration reduces both violent crime and property crime rates. Thus, another contribution of the current study is looking into the difference or similarity of immigration's effect on violent crime and property crime.

One of the most compelling arguments that explain how immigrant concentration is negatively related to neighborhood crime is the "immigrant revitalization perspective" (Ousey & Kubrin, 2018). Basing on the "immigrant revitalization perspective," immigration concentration reduces neighborhood crime by strengthening social ties and social controls, as well as invigorating local economy (Feldmeyer, 2009; Lee et al., 2001; Martinez, 2002; Martinez et al., 2004; Reid et al., 2005). First, the revitalization thesis posits that the intact structure in immigrant families due to a profamily culture combined with frequent residence in ethnic

enclaves translates into social ties which are expected to exert social control (Ousey & Kubrin, 2009). For instance, Dohan (2003), in a study of Guadalupe, a Mexican barrio with a high concentration of immigrants in California, demonstrated that immigrant families and neighborhoods exercise social controls by gathering and overseeing children who hangout in the yards in the evening. His study illustrated that immigrant populated neighborhoods might have strong informal social controls that immigrants in these communities make collective efforts to maintain order in public spaces. Thus, immigrants could develop firm social ties and fortify informal social control in neighborhoods, and these communities are more likely to have stronger ties and social control that helps to prevent crime (Figure 1-a).

Second, immigrant concentration revitalizes the local economy (Portes & Zhou, 1993; Sampson, 2017; Vigdor, 2014). In places with a higher concentration of immigrants, there is an increased amount of low-wage jobs and consumption in the immigrant community, which eventually formed “ethnic enclaves” (Sampson, 2008; Waldinger, 1989). According to Portes and Zhou (1993), ethnic enclaves create new job opportunities through culturally specific restaurants, vendors, and other divisions of labor to respond to the increasing need for immigrant populations. Dohan (2003) found that for residents in Guadalupe, the most common means of earning income are legal earnings through low-wage jobs or illegal earning through illegal activities. Whichever methods they choose, opportunities for both low-wage jobs and illicit activities are reached through their families, friends, and neighbors. As an illustration, Jose in Dohan’s study (2003) got his part-time job in a food-processing plant where his mother worked, and he was also introduced to illegal opportunities, but he refused

it. Consistent with the previous study (Portes and Zhou,1993), people in Guadalupe are less likely to commit crimes because they have a greater attachment to the labor market and conventional lifestyles. Thus, the economic growth by providing job opportunities in ethnic enclaves spurs the local economy and creates substantial social ties in labor markets, and eventually reduces crime (Martinez, 2006) (Figure1-b).

While the research at the macro-level consistently shows that immigration helps to reduce crime, a concern with these works is that these beneficial effects have nothing to do with community level dynamics but something to do with immigrants themselves. That is, the inverse relationship can be reduced to the compositional characteristics of immigrants. Two issues are particularly important here. First, immigrants are less likely to commit crimes than natives (Butcher & Piehl, 1998). There are high costs for both illegal and immigrants to commit crimes, such as deportation (Sampson, 2008). Due to the laborious process of immigration, rather than having a higher criminal propensity and more likely to commit crimes, immigrants are motivated to work hard to avoid deportation (Butcher & Piehl, 2005; Sampson, 2008; Tonry, 1997). Scholars found that there is no consistent evidence that immigrants are more crime-prone than the natives (Butcher & Piehl, 1998; Hagan and Palloni, 1998). Second, immigrants come to the US with their own cultures, and these social capitals provide support for them in a new environment to stay away from crime (Dinovitzer et al., 2009; Vaughn et al., 20114). For example, Dinovitzer et al. (2009) suggested that due to the culture of investment in education in immigrant families, especially Asian immigrant families, immigrant youth are less likely to commit crimes. This is because their cumulative investments and commitments to

school make illegal activities unfavorable and unworthy (Dinovitzer et al., 2009). Also, it is possible that less-educated and less-skilled immigrants would not turn to criminal activities because they could still obtain economic opportunities in ethnic-business through their networks, which are prolific in cities with a large immigrant population (Portes & Zhou, 1993; Reid et al., 2005; Wilson 1996). Unfortunately, these compositional influences cannot be examined using NNCS due to the nature of the data. Further efforts in handling this issue will be discussed in the discussion.

### **Labor Instability as a City Context**

As stated in the “immigrant revitalization perspective,” economic factors, especially labor market conditions, could have significant effects on the association between immigration and crime at the neighborhood level. Yet, it is crucial to consider the economic conditions at the city level. Prior research demonstrated that the effects of immigration on crime moderated by city’s immigrant political opportunities and by types of immigration destinations (Harris & Fledmeyer, 2013; Lyons et al. 2013; Martinez, 2002; Ramey, 2013). For instance, Ramey (2013) found immigrant prevalence and growth in immigrant populations have no effects on neighborhood crime across various racial/ethnic neighborhoods. But immigrant concentration reduces neighborhood violent crime in established destination cities, while this inverse relationship only exists in Latino communities in new destination cities (Ramey, 2013). Hence, this study brings in another new contextual factor, city labor instability, to the study of immigrant-crime nexus because people in metropolitan areas are most likely to work outside of their neighborhoods (Dohan,

2003). For example, the labor market conditions in the Guadalupe neighborhood much depend on the city around the area - Silicon Valley (Dohan, 2003). Also, cities are usually the places where jobs are located, and ethnic enclaves exist, such as Chinatown and Little Italy in New York City. Hence, measuring economic conditions at the city level could better capture the vitality of the labor market than only considering the economic conditions at the neighborhood level.

I extend the revitalization effects of immigrant concentration to argue that economic conditions, especially the labor market, in the city level would change the relationship of neighborhood immigrant concentration and crime. In particular, I focus on city levels of labor instability and how it moderates the immigration and crime relationship. Previous research guides how this moderating relationship might work. It may be that cities with significant labor instability undercut the beneficial effects of immigrants on neighborhood crime (Xie & Baumer, 2018). Scholars argued that the weak economy with limited job opportunities might lead to competition and conflicts in the labor market. Friction in labor markets could happen among different immigrant groups as well as between immigrants and native workers. Prior studies revealed that there were competitions between native-Black and immigrant workers in the secondary labor market and that immigrants have led to a significant drop in native-Black employment (Reed & Danziger, 2007; Waldinger, 1997). Likewise, Shihadeh and Barranco (2010a; 2010b) found that Black violence rises when Blacks are competing with Latino immigrants for jobs in the low-skills labor market both in urban and rural areas. These frictions will not only break social ties among residents in communities but also impair the ties within workplaces, which diminish people's

commitment to the labor market at the neighborhood level. As social ties weaken, informal social controls in the neighborhood will be lessened in such a way that neighborhoods are less capable of controlling crime. In this case, I expect that the inverse relationship between immigrants and crime will be diminished or become insignificant when the city has relatively high labor instability.

In contrast, cities with relatively high labor instability may enhance the protective effect of immigration on crime. Immigrants may be more likely to work together and help each other out when all are suffering under the weak economy. As stated in the “immigrant revitalization perspective,” immigrants are more likely to establish strong social capitals in immigrant concentrated neighborhoods (Lee & Martinez, 2002; Martinez, 2006). A major source of social capital is from the immigrant family because they tend to have an intact family and pro-family culture (Martinez et al., 2004). These mutual trusts, norms, and networks, which are features of social capitals, will facilitate collective action to achieve collective success. To illustrate, immigrants tend to obtain jobs through their social networks. Dohan’s study (2003) demonstrated that Mexicans immigrants are willing to provide employment resources and support to their family and friends when they are all living in impoverished areas. Also, when there are steady and good quality jobs available, they would save these valuable opportunities for their close family members. Their commitments to their jobs show that their everyday life much centers on their work, so they are strongly tied to the workplace. Also, the attachment to the workplace could be enhanced when working with family members. Thus, the ties with the labor market and the family increase social controls, which help prevent neighborhood

crime (Crutchfield, 1997; Dohan, 2003; Sampson & Groves, 1989). I anticipate that the inverse relationship between neighborhood immigrant concentration and crime will be enhanced when the cities are experiencing relatively high labor instability.

There are various ways that labor instability could relate to neighborhood crime. First, according to dual labor market theory, the characteristics of secondary sector low-wage jobs, which is the major component of labor instability, is inherently affecting one's criminality (Crutchfield and Pitchford, 1997). In contrast to primary occupations that are central to the economy, such as professions, managers, and skilled craft workers, secondary occupations are the jobs on the fringe of the economy (Crutchfield, 1989). Examples of secondary-sector jobs are domestic servants, and waiters and waitresses (Crutchfield, 1989). Secondary sector jobs are poorly paid and have a short period of employment, while primary sector jobs are well-paid, skilled, and stable. With unstable jobs, secondary sector workers are unable to develop strong ties with their workplace and bond with their colleagues. Also, secondary sector workers are usually not committed to schools, so they are more likely to be drawn to criminal activity. In this case, lack of attachment to the workplace and school was found to be a strong predictor of individual criminal behavior as well as community cohesiveness (Crutchfield, 1989; Crutchfield and Pitchford, 1997). Thus, labor instability has an indirect negative effect on neighborhood stabilization to prevent crime.

Additionally, secondary sector low-wages jobs could also pose positive effects on reducing neighborhood crime. When examining the relationship between secondary sector work, low-hour work, low-pay work, and levels of violence, Lee and

Slack (2008) found that areas with more low-hour and seasonal employment have less violent crime in both metro and non-metro areas. They argued that the availability of low hour and seasonal jobs could still provide some sort of social regulation on the workers because these jobs helped to form conventional activities and socialization (Lee & Slack, 2008). Along these lines, limited opportunities to enter the secondary sector labor market, where immigrants are most likely to work, may lead to disadvantaged living conditions that could force them into criminal activities.

Previous studies on economy and crime focused on the link between unemployment and crime, and evidence showed this relationship is mixed or positive. However, unemployment alone may not be the proper measurement of economic status. Previous studies demonstrated that labor instability is better capturing the labor market conditions, and it is significantly related to crime. Crutchfield and Pitchford (1997) found that characteristics of labor markets affect one's criminality, especially for people who experience short-term employment. In addition to job duration, the quality of jobs also influenced crime (Allan & Steffensmeier, 1989; Krivo & Peterson, 2004; Wadsworth, 2006). Krivo and Peterson (2004) found that the quantity and quality of jobs influence neighborhood violent crime, even though the effects varied by age. Both quantity and quality of jobs had no impact on teen violence but had significant impacts on young adult arrests. Only the quantity of jobs influenced violent arrests in older adults (Krivo & Peterson, 2004). Also, Allan and Steffensmeier (1989) found that the quality of jobs is more important for adults, while the presence of job opportunities is more critical for youths.

A large body of studies substantiated the importance of using secondary sector low-wage jobs to indicate labor market condition. However, it is also reasonable to include joblessness. Joblessness is measured by the percentage of working age population, from 16 to 64, who are unemployed or not in the labor force. I suspect that in a feeble labor market, there are higher rates of joblessness because the working age population was not able to secure jobs. Altogether, labor instability, which consists of secondary sector low-wage jobs and joblessness, is a legitimate measurement of precarious labor market conditions.

### **Gateway Status as an Additional Influence on the Immigration-crime Nexus**

The moderating effects of city labor instability on immigrant prevalence and crime are expected to be different between the gateway and non-gateway cities because the literature showed that gateway cities with a history of immigration and racial/ethnic diversity provide “receptive” contexts for immigrants (Portes & Rumbaut, 2006). According to Ramey (2013), “a receptive context is one in which the government, labor market, and a large co-ethnic community serve to integrate new arrivals socially and economically” (Ramey, 2013:602), and gateway cities provide receptive context. Since “ethnic enclaves” are more likely to develop in cities with receptive contexts, “enclave economies” may help in preventing crime in immigrant neighborhoods through strengthening social ties and exerting informal social controls (Portes & Rumbaut, 2006). Hence, gateway cities are more receptive to immigrants and help them to integrate into the neighborhood because in such cities: (1) co-ethnics provide social capital to their fellow new immigrants; (2) there

are institutions that help with immigrant integration; and (3) these cities provide employment opportunities (Velez & Lyons, 2012).

Evidence from previous studies upholds the argument that immigrants have revitalizing effects on neighborhood crime when looking at cities with a long history of immigration, for instance, Chicago, Los Angeles, San Diego, and Miami (Graif & Sampson, 2009, Kubrin et al., 2018, Lee & Martinez, 2002). Assessing the relationship between immigrants and violent crime, Ramey (2013) examined how this relationship differs depending on the varying receptive contexts of gateway and non-gateway cities. He found that the association between immigration and violent crime varies significantly depending on gateway status. Gateway cities have substantially lower rates of violent crime than non-gateway cities. Given the moderating influence of a city's gateway status, I expect that the moderating effect of labor instability will be different between gateway and non-gateway city. Since gateway cities provide receptive contexts that help to integrate immigrants, the moderating effect of labor instability should be significant in gateway cities but not in non-gateway cities.

The current study aims to extend and fill the gap of the moderating influence of economic conditions on the immigration-crime nexus in prior research. I aim to analyze how the association between neighborhood immigration and crime, both violent and property crime, is moderated by city labor instability, and whether this moderating effect varies by city's gateway status. The research questions are: (1) Do unfavorable economic conditions, captured by city levels of labor instability, moderate the immigration-crime relationship at the neighborhood level, and (2) does

this moderation effect of labor instability on the immigration-crime relationship differ by cities' gateway status?

## Chapter 3: Data and Method

### Sample

I utilize the National Neighborhood Crime Study (NNCS), which was collected by Peterson and Krivo (2010b). These data include socio-demographic information and official crime data from a sample of U.S. cities with a population of 100,000 and above for the year 2000. Crime data in the NNCS were obtained directly from the local police department and are connected to the neighborhood (census tract). Detailed socio-demographic information is obtained from U.S. census data. The original sample consists of 91 cities and 9,593 neighborhoods (census tracts). Sampled cities in the data are meant to be representative of medium to large cities in the U.S. (Peterson & Krivo, 2010a). These cities are distributed throughout the U.S. within the Northeast and the Midwest combined, the South, and the West. The final sample for the model is 8,931 census tracts across 87 cities due to missing data for violent crime. It is more likely to generalize results across urban neighborhoods throughout the country using data with such a large sample. The unit of analysis is census tracts, and this is the measure of the neighborhood. Lastly, the NNCS is the appropriate data because it includes variables of interest, and they were measured at both the neighborhood level and the city level. To implement a cross-level model, it is necessary to have such data, and there are a great number of studies that used NNCS for multi-level analysis (Lyons et al., 2013; Peterson & Krivo, 2010a; Ramey, 2013; Velez & Lyons, 2012; Wenger, 2018).

## **Dependent Variable**

In this study, I examined both violent crime and property crime at the tract level. The measures of violent crime are the three-year average count (1999-2001) of homicide and robberies. Homicide is the most severe and reliable violent crime measurement, and robbery is a common violent crime in the metropolitan area even though it is a less reliable measure in official crime data (Lyons et al., 2013). Also, the measurement of violent crime with homicide and robbery was widely used in former immigration and crime studies (Lyons et al., 2013; Peterson & Krivo, 2010a; Reid et al., 2005). Similarly, property crime is measured by the three-year average count (1999-2001) of burglaries, larcenies, and motor vehicle theft. Following previous literature, property crime includes burglary, larceny, and motor vehicle theft to capture a variety of property crime (Kubrin et al., 2018; Peterson & Krivo, 2010a).

## **Key Independent Variables**

Tract-Level.

*Immigrant prevalence.* The immigrant concentration is measured by an index ( $\alpha = 0.96$ ) calculated by the average of the standard scores of three variables related to immigrants: percentage foreign-born, percentage of recent immigrants, and percentage linguistically isolated. Scholars studying similar topics used similar measurements (Peterson & Krivo, 2010; Lyons, Velez, & Santoro, 2013).

Scholars have operationalized the concentration of immigrants in various ways, such as with percent foreign-born or an index that contains variables related to immigrant characteristics (Ousey and Kubrin, 2018). One limitation of these

measurements is that they treat immigrants as a homogeneous population because research showed that different immigrant groups have different effect on crime (Kubrin et al., 2018). However, a meta-analysis on variability in measuring immigration found that different measurements of immigration do not produce a significant impact on the immigration-crime association for macro-level analysis (Ousey and Kubrin, 2018). Also, Lyons and his colleagues (2013) demonstrated that alternative measures produce similar results on crime after running sensitivity analyses for the immigrant prevalence and other single-item and index measurements. Thus, I use the immigrant prevalence index as my key independent variable.

#### City-Level.

*Labor Instability*<sup>1</sup>. Labor instability refers to an unsteady labor market that is a result of unfavorable economic conditions in the city. Following previous studies (Crutchfield et al., Unpublished), I created a measure of labor instability to capture economic conditions at the city level. Labor instability is a standardized index ( $\alpha = 0.79$ ) combining the percentage of secondary sector workers and the percentage of joblessness. The percentage of secondary sector workers is measured by the percent of the total employed civilian population age 16 and older employed in the six occupations with the lowest mean incomes in the year of the data collected. From 2000 census data, the six secondary sector low-wage occupations are: (1) health care

<sup>1</sup> I considered individual moderating influences of percent secondary sector workers and percent joblessness on the immigration-crime association. These two measures produce very similar interaction effects, and the results of the models stay the same (Table 7 & Table 8). Hence, I decided to use the labor instability index as the measurement of unstable economic conditions in the cities.

support, (2) food preparation and serving occupations, (3) building/grounds cleaning/maintenance workers, (4) personal care and service, (5) farming, fishing, and forestry, and (6) material moving. The percentage of joblessness is the percentage of civilian labor force that are working age (16-64) who are unemployed or not in the labor force.

*Gateway status.* I create a dichotomous indicator for all the cities in the sample, where one means gateway cities, and zero means non-gateway cities. Gateways are cities with metropolitan populations greater than one million and a long history of immigrant settlement or that experienced fast immigrant population growth between 1990 and 2000 (Singer, 2004). Singer (2004) indicates various types of gateways, but I decided to include cities, which are available in the sample, that were mentioned in all types of gateways except former gateways. Therefore, former gateway cities are coded as non-gateway cities. The reason to exclude the former gateways is because they are cities that once attracted immigrants in the early 1990s, but they no longer do so. They are unlikely to provide receptive contexts for immigrants since they are no longer used to them entering the city, possibly losing their protective effects when investigating immigration-crime relationships. Thus, former gateways defined by Singer (2004) are not regarded as gateways in this analysis. Using Singer's (2004) definition and categories of gateways, I classify the following 19 cities as gateway cities: Austin, Boston, Charlotte, Chicago, Dallas, Denver, Fort Worth, Houston, Los Angeles, Miami, Minneapolis, Oakland, Phoenix, Portland, San Bernardino, San Diego, Seattle, Tampa, Washington, DC. All other cities in the sample are categorized as non-gateway cities.

## **Control Variables**

Tract-level.

Following previous studies and especially Peterson and Krivo (2010) and in line with social disorganization arguments (Sampson & Groves, 1989; Shaw & McKay, 1942), measures of residential mobility, neighborhood disadvantage, and racial heterogeneity are established predictors of neighborhood crime and should be included in the models as control variables.

*Residential instability.* This measure is based on the average of the standard scores for two related variables ( $\alpha = 0.69$ ): percent renters and percent movers. The percentage of renters is the percentage of occupied housing units that are occupied by renters, and the percentage of movers is the percentage of the population aged five and above who lived in a different house five years ago (in 1995).

*Neighborhood disadvantage.* The neighborhood disadvantage index ( $\alpha = 0.93$ ) combines the average of the standardized scores of six variables: percentage of high school graduates (reverse coded), jobless rate, percentage of professionals and managers (reverse coded), percentage of female-headed households, percentage of secondary sector low-wage jobs, and living below the poverty line. This index has been widely used in previous research that used NNCS for studies in neighborhood and crime (Peterson & Krivo, 2010; Ramey, 2013).

*Racial heterogeneity.* In terms of racial/ethnic diversity at the neighborhood level, I created four dichotomous indicators for four types of ethnic-racial neighborhoods following Peterson and Krivo (2010): predominantly African

American, predominantly Latino, predominantly minority, and integrated. The predominantly white neighborhood is the reference group. One signifies the neighborhoods have 70 percent or more specific ethno-racial group, and otherwise coded as zero.

Besides the variables that are related to neighborhood crime according to social disorganization theory (Sampson & Groves, 1989; Shaw & McKay, 1942), I also consider other control variables following previous literature (Peterson & Krivo, 2010).

*Residential loans.* This variable measures the total amount of loans that were originated, approved but not accepted, or denied by financial institutions.

*Percent young male.* This variable is the percentage of young males in the population that are aged between 15 to 34.

*Spatial Lags.* Spatial lags are the average violent crime and property crime counts for Census tracts that are geographically adjacent to the target tract. They are constructed by multiplying tract characteristics by a row standardized first-order spatial contiguity matrix which uses a queen criterion (Peterson & Krivo, 2009; Peterson & Krivo, 2010b).

City-level.

Following Peterson and Krivo (2010a), I also included a number of measures of cities' characteristics that are associated with cities' labor market conditions and crime.

*Percent manufacturing.* This variable is the percentage of employed people who work in the manufacturing industries in 2000 and at least 16 years old. Previous research stated that cities with a stronger manufacturing base have a lower level of violent crime (Peterson & Krivo, 2010a). Since these cities tend to have sufficient economic resources, such as good jobs and substantial tax, to invest in local communities and public services, there are more supports from police and conventional opportunities that prevent residents from engaging in criminal activities (Peterson & Krivo, 2010a). This variable was used as a proxy for the macroeconomic character of cities, to investigate the sole effect of labor market condition on crime, it is necessary to control percent manufacturing.

*City population.* This variable indicates the city population at 2000.

*Percent recent movers.* This variable is the percentage of a city's population ages 5 and over who moved in 1995.

*Percent African American.* This variable is the percentage of the total population that is non-Hispanic Black.

*Percent Hispanic.* This variable is the percentage of the total population that is Hispanic.

*Percent foreign born.* This variable is the percentage of the total city population that is foreign-born.

*Percent young males.* This variable is the percentage of young males in the population that are aged between 15 to 34.

*White/Black Segregation.* This variable indicates the racial segregation between white and black across city in 2000.

*Region.* There are three dummy variables that indicates which region of the cities is located in the U.S. They are Midwest, South, and West. Northeast is the reference group.

### **Analytical Strategy**

To assess how the city-level labor instability moderates the nexus between immigration and crime at the neighborhood level, I estimate hierarchical generalized linear models (HGLM) with tracts as level-one units and city as level-two units. Tracts are nested within cities. According to literature, there are two reasons to fit a negative binomial model in a HGLM framework (Lyons et al. 2013; Ramey, 2013; Velez & Lyons, 2012). First, the dependent variables are counts on violent crime and property crime, and they are rare events within small units (census tracts). Second, to control for over-dispersion in the tract level (level-one) variance, a negative binomial model was used instead of a Poisson model, which is a model usually used for count outcomes. I also specify the crime counts with exposure of population at the tract level, which is the same as analyzing crime rates across the neighborhoods (Osgood, 2000). To explore whether the nexus between immigrant prevalence and crime at the neighborhood level varied across cities, I allow random variation in the slope of immigrant prevalence. Lastly, I estimate separate models for violent and property crime, and for gateway and non-gateway cities. The following equations are HGLM for violent crime and property crime separately:

$$Y_{ij} = \beta_{0j} + \beta_{1j}Immigrant\ Prevalence_{ij} + \beta_{ij}X_{ij} + r_{ij} \quad (1)$$

$$\beta_{0j} = r_{00} + r_{01}Labor\ Instability_j + r_{0j}W_j + u_{0j} \quad (2)$$

$$\beta_{1j} = r_{10} + r_{11}(Immigrant\ Prevalence \times Labor\ Instability)_j + u_{1j} \quad (3)$$

In the above equations,  $i$  stands for level one units – neighborhoods or census tracts,  $j$  represents level two units – cities,  $X_{ij}$  indicates explanatory variables at the neighborhood level, and  $W_j$  indicates explanatory variables at the city level. Equation (1) shows the estimation at the neighborhood level of  $Y_{ij}$  which is the predicted number of crimes, either violent crime count or property crime counts.  $\beta_{0j}$  is a constant,  $\beta_{1j}$  is the estimated coefficient of immigrant prevalence,  $\beta_{ij}$  is the estimated coefficients of all other tract-level control variables, and  $r_{ij}$  represents the between neighborhood variation in crime. Equation (2) provides the estimation at the city level of  $\beta_{0j}$ , which is the constant in equation (1).  $r_{00}$  is a constant,  $r_{01}$  is the estimated coefficient of city labor instability,  $r_{0j}$  indicates the estimated coefficient of all other city-level control variables, and  $u_{0j}$  represents the between city variation in crime.

Equation (3) is a cross-level interaction model of tract-level and city-level estimations. To estimate  $\beta_{1j}$  in Equation (1),  $r_{10}$  is a constant, and  $r_{11}$  is the estimated coefficient of the interaction term of neighborhood immigrant prevalence and city labor instability. Here,  $u_{1j}$  is the variation in the effect of  $X_{ij}$  on  $Y_{ij}$ . This allows the interaction effect could vary across cities.

## Chapter 4: Results

Table 1 displays the descriptive statistics for the variables included in the study. Neighborhoods, on average, have about 15 violent crime incidents and 217 property crime incidents. Turning to the key tract-level independent variable, since it is an index, I will discuss its components. On average, 16.32% of the people are foreign-born, 7.52% of them are recent immigrants, and 7.7% of them are linguistically isolated in the neighborhoods in the sample. The average level of labor instability, the key city-level independent variable, is also close to zero with a range from -2.69 to 2.99. Lastly, there are 19 gateway cities, and 4,374 (48.98%) census tracts are in these cities.

Table 3 presents the estimated coefficients with robust standard errors in parentheses for separate multilevel models for violent crime. Consistent with previous research (Ousey & Kubrin, 2018), model 1 shows that neighborhoods with greater immigrant prevalence had fewer serious reported crimes. When holding all else constant, for every unit increases in immigrant prevalence, a neighborhood's mean violent crime decreases by 11.2%. Model 3 provides data on the moderating effect of labor instability on the association between neighborhood immigrant concentration and violent crime. As I expected, cities' labor market conditions significantly moderated the relationship between immigrant prevalence and violent crime at the neighborhood level. After considering cities' labor instability, for every unit increases in immigrant prevalence, a neighborhood's mean violent crime decreases by 12.2% (one percent more than model 1). In cities that experience labor instability the inverse relationship is strengthened compared to cities that provide robust labor conditions.

The variance components of immigrant prevalence is also significant. This means that the level of neighborhood immigrant prevalence varies substantially across cities.

**Figure 1. Predicted Effect of Immigrant Prevalence on Violent Crime by Level of City Labor Instability**

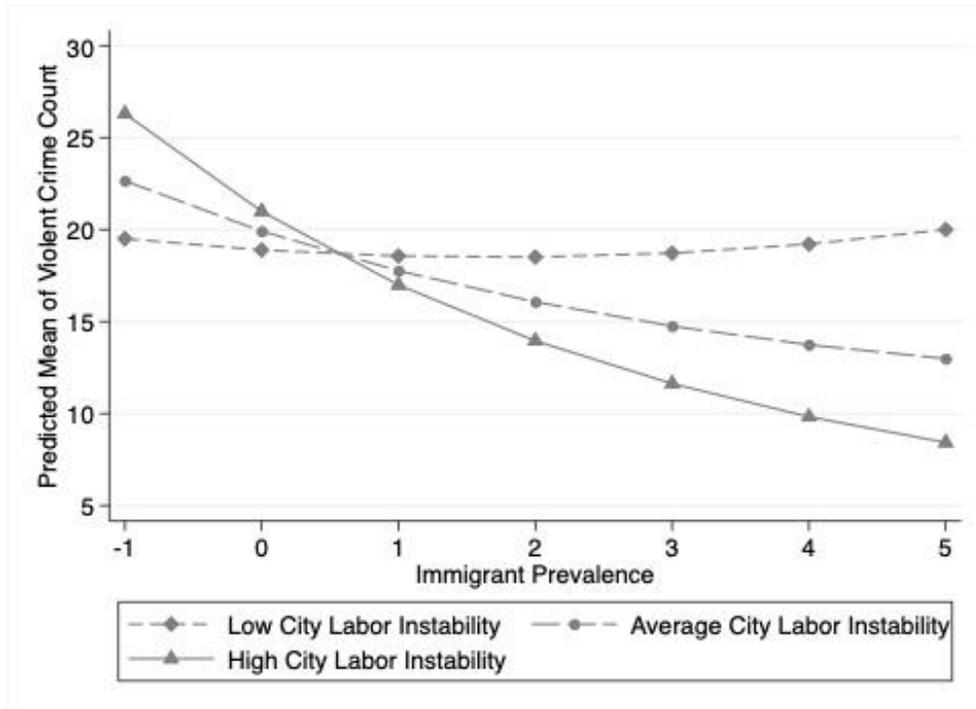
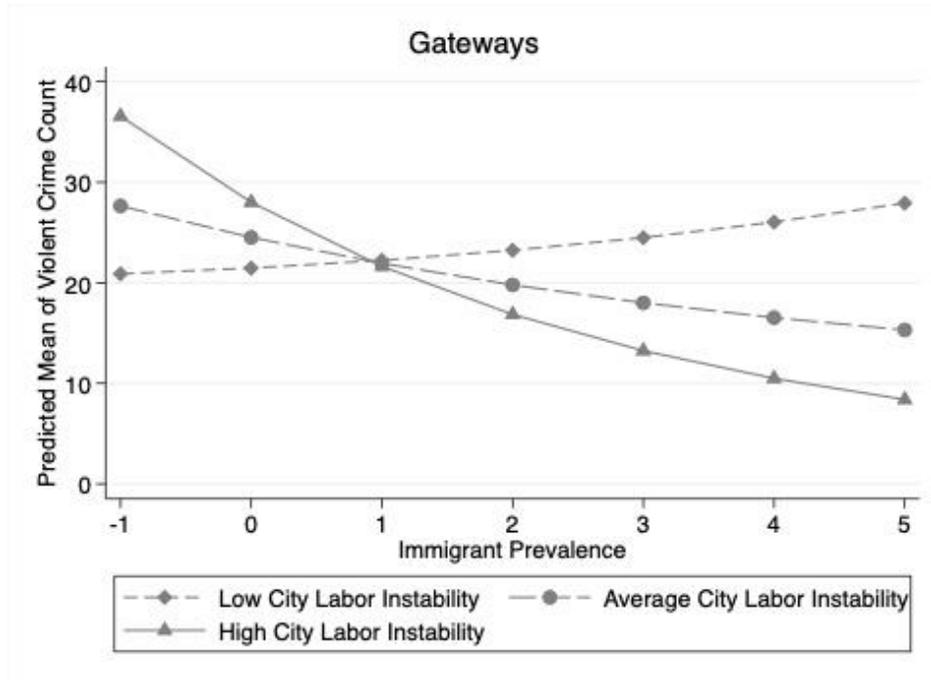


Figure 1 provides a visual depiction of the statistically significant interaction from Model 3 in Table 3. Recall that this interaction shows that the protective influence of immigration against violent crime is fueled as the city’s labor instability worsens. The solid line marked by triangles represents the predicted effect of immigrant prevalence on violent crime in cities with high labor instability, indicating a weak labor market condition. The negative slope is quite steep and reaches the lowest predicted level of violent crime at high levels of immigrant presence. Immigration is particularly effective, in other words, in reducing violent crime in

cities with weak labor market conditions. In contrast, the line marked by diamonds, shows that in cities with low city labor instability, considered a robust economy, the inverse effect of immigrant presence on violent crime is diminished. That is, the number of violent crimes were relatively unchanged by immigration for neighborhood in cities with a healthy labor market.

The next set of analyses explore whether the moderating effect of labor instability varies by gateway status. Table 4 presents estimates of the HGLM models separately for gateway and non-gateway cities. As mentioned above, since gateway cities provide receptive contexts for immigrants, and ethnic businesses are more likely to thrive in gateway cities, I expect that labor instability will only moderate the immigrant-crime nexus in gateway cities. Surprisingly, labor instability significantly moderated the association between immigrant prevalence and violent crime at the neighborhood level for both gateway and non-gateway cities (Table 4). Despite gateways status, for every unit increases in immigrant prevalence, a neighborhood's mean violent crime decreases by 11.6% in gateway cities, and 13.3% in non-gateway cities while controlling other covariates.

**Figure 2. Predicted Effect of Immigrant Prevalence on Violent Crime by Level of City Labor Instability in Gateway Cities**



**Figure 3. Predicted Effect of Immigrant Prevalence on Violent Crime by Level of City Labor Instability in Non-Gateway Cities**

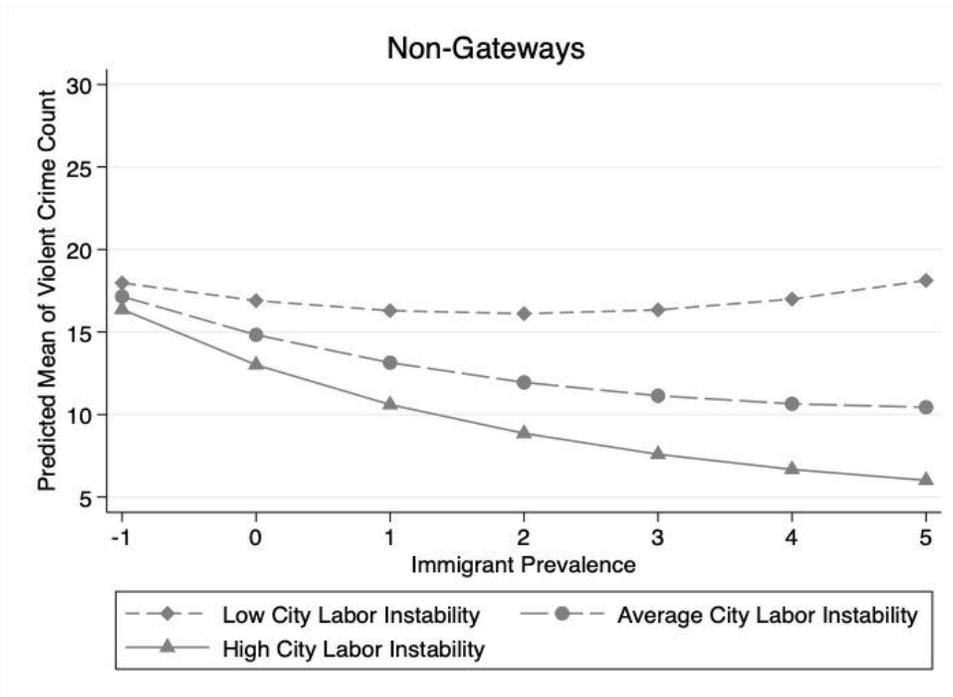


Figure 2 and 3 show how the interaction plays out by city's gateway status. As demonstrated in Figure 2, city labor instability is significantly moderating the immigration-violent crime association at the neighborhood level regardless of gateway status. This interaction effect seems exclusively beneficial for neighborhoods in gateway cities with an unstable labor market. Interestingly, for gateway cities that are performing well, a higher level of immigrant prevalence is related to more violent crime. For non-gateway cities (Figure 3), neighborhood violent crime generally decreased with increasing immigrant populations across various levels of city labor instability. However, for cities with low city labor instability, violent crimes are unaffected or slightly raised with increasing levels of immigrant presence.

Turning to property crime which is demonstrated in Table 5, the baseline model for property crime (Model 4) shows that immigrant prevalence is inversely related to neighborhood crime, as suggested by prior studies (Ousey & Kubrin, 2018). When holding all else constant, for every unit increases in immigrant prevalence, a neighborhood's mean property crime decreases by 13.7%. However, unlike violent crime, labor instability does not significantly moderate the immigrant-property crime relationship (Model 6). Regardless of how the cities' labor market is behaving, a higher concentration of immigrants is related to less property crime at the neighborhood level. Moreover, the interaction effect of labor instability is also not statistically significant for property crime in both gateway and non-gateway cities (Table 6). The level of immigrant prevalence is inversely related to neighborhood property crime disregarding the city's labor market conditions and gateway status.

Together, findings from the multilevel analyses suggest that labor instability at the city level significantly moderate the relationship between immigration and violent crime, but not property crime. For cities that have a relatively higher level of labor instability, immigrants might work together to fight against economic hardship, strengthening social ties and social control. In turn, this revitalization of community social organization likely produces a reduction of neighborhood violent crime, and this beneficial effect of labor instability does not differ by gateway status.

## Chapter 5: Discussion and Conclusion

Immigration and crime have been widely studied, and past research shows that immigration either have no effect on crime or reduce neighborhood crime (Ousey & Kubrin, 2018). In this study, I set out to explore the ways in which the labor market condition at the city level influences the immigrant-crime nexus at the neighborhood level. The "immigrant revitalization perspective" argued that immigration reduces crime through strengthening social ties and stimulating the local economy (Martinez et al., 2010; Ousey & Kubrin, 2018). I highlight the role of labor instability as a moderator on the influence of immigration and serious reported crime. Focusing on the economic aspect, I anticipate labor instability will moderate the association between immigrant concentration and crime, both violent and property crime. High labor instability could diminish the negative relationship between immigration and crime by weakening social ties and informal social control, which is due to conflicts and competition in the labor market (Reed & Danziger, 2007; Shihadeh & Barranco, 2010a; Waldinger, 1997). In contrast, in cities with a higher amount of labor instability, the beneficial effect of immigration on crime could be bolstered through strong social capitals among immigrants, which facilitate collective action in preventing neighborhood crime (Martinez et al., 2010; Sampson, 2008). To explore these ideas, I investigated the moderating effect of city labor instability on the immigration-crime relationship. I also explore how this cross-level interaction effect is shaped by a city's status as an immigrant gateway city.

To address my research questions, I employ multilevel analysis using negative binomial models in the HGLM framework using the NNCS. Findings from the

analyses show support that city labor instability has a significant impact on the immigration-crime relationship at the neighborhood level, but only for violent crime. In a city with high labor instability, a higher prevalence of immigrants in the neighborhood is related to fewer neighborhood violent crime incidents compared to a city with a stable labor market. This significant interaction effect means that the beneficial effect of immigration on crime is greater in cities undergoing economic hardship. Immigrants may build stronger ties and help each other out when all of them are suffering under an unsteady labor market. Since immigrants tend to form strong social capitals in immigrant concentrated neighborhoods, the mutual trust and attendant networks would help to bring out collective actions in preventing neighborhood crime (Lee & Martinez, 2002; Martinez, 2006; Martinez et al., 2004). In contrast to findings on violent crime, immigration reduces property crime no matter how the city's labor market is performing. For the second research question, the results show that the moderating effect of city labor instability is substantial for gateway and non-gateway cities, but this significant interaction effect is only pertinent for violent crime and not property crime. Because gateway cities provide a "receptive context," I anticipated that the interaction effect should be different for gateways and non-gateways. Nevertheless, gateway status is inconsequential for the moderating effect of city labor instability, which is only meaningful to violent crime but not property crime.

What are the implications of these findings and research on immigration and crime? First, little research has considered how economic status at the city level would influence the immigrant-crime relationship at the neighborhood level. This

study fills the gap in the literature by investigating how city economic conditions moderate the inverse relationship between immigration and crime at the neighborhood level. Secondly, previous studies demonstrated the importance of considering the city context, especially gateway status (Ramey, 2013; Velez & Lyons, 2012). By bringing in this new idea, this study widens the current understanding of immigration-crime nexus and shows the significance of connecting macro-level factors with a micro-level relationship, which is meaningful in neighborhood studies (Sampson, 1988; Sampson, 1991). Lastly, this study uncovers the way in which a city's conditions fuel the revitalization process of immigration on neighborhood crime. It sheds light on a city's economic status and demonstrates that the revitalization process greatly depends on how a city's labor market is performing.

Important limitations on the data, measurement, and other methodological issues in this study should be discussed. First, the crime data used in the analyses are official crime data collected from police departments. These data may result in underestimation due to underreporting, and this is one of the biggest limitations in immigration and crime literature (Ousey & Kubrin, 2018). Especially for the immigrant population, they might prefer not to report crime when they distrust the criminal justice system due to former experience (Xie et al., 2018), or when their immigrant statuses are illegal (Kubrin, 2013). However, this is less of an issue in gateway cities. A study showed that violence in traditional immigrant counties is not underreported when controlling individual and neighborhood conditions because immigrants in those places have minor impediments in the process of seeking police help (Xie & Baumer, 2019). Also, due to the nature of the NNCS, I was unable to

investigate the compositional effect of immigration on crime, and how this relationship would be influenced by city labor instability. A possible solution could be using crime victimization data (e.g., National Crime Victimization Survey) because they have individual-level data and cover crimes that are not reported to the police.

Secondly, labor instability is measured by secondary sector low-wage jobs and joblessness in the current study. However, there might be other ways to operationalize labor market conditions, such as measuring both supply and demand side of the employment and duration of jobs. With a comprehensive measure of the labor market, it is possible to find a more substantial support for the significant interaction effect of labor instability. Third, the current study did not control policing activities in the analyses. Previous research showed that local police resources could affect crime reporting. After controlling police force size, expenditures, and the likelihood of police notification over time, immigrants in neighborhoods with high immigrant concentration are less likely to report violent crimes in a new immigrant destination than in an established immigrant destination (Xie & Baumer, 2019). Future research should make efforts to take policing into consideration. Lastly, the data used in this study is cross-sectional. Same as other social factors and policy implementation, it is noteworthy that labor market conditions take time to perform its influences. The beneficial interaction effect of labor instability may be stronger in the later years, which is not captured in the NNCS. Or the interaction effect of the labor market may be deleterious, but I fail to discover this in the current study using cross-sectional data.

Through this study, I offer three avenues for future research. First, a meta-analysis on immigration and crime literature found that the immigration-crime relationship is greatly depending on the destination context. There are various ways to operationalize gateway status or established destinations (Ramey, 2013; Singer, 2004; Velez & Lyons, 2012; Xie & Baumer, 2018). Even though I did not find significant differences between the gateway and non-gateway cities for the interaction effect of labor instability, future research should explore other categories of immigrant destinations. Second, this study focuses on macro-level immigration-crime relationship, which includes contextual factors at the neighborhood level and the city level. However, it is also crucial to investigate how these macro-level influencers would affect individuals. A potential research question could be how the immigrant-crime relationship at the neighborhood level will mediate the impact of city labor market conditions on individual criminal behavior. Third, my measure of labor instability only covers the legal labor market. Yet, scholarship shows that immigrants often turn to employment opportunities that are “under the table” or illegal. For instance, Dohan (2003) shows that some of the immigrants he studied turned to illegal jobs like drug trading when there were limited job opportunities or the jobs are poorly paid. A further step from this study could explore how prevalent illegal or underground economics shape the immigration-crime relationship.

In conclusion, this research shows that the role of city labor instability in explaining the relationship between immigrant prevalence and neighborhood violent crime. Thus, the immigration and crime story is not one that can be told from solely looking at neighborhood characteristics. Rather, a fuller understanding is to embed

neighborhoods within cities and particularly their labor market conditions. Future studies should build on findings from this study to explore the impact of other cities' contextual factors, including labor market conditions, on not only immigration and crime studies but also expand to neighborhood and crime research. If immigrants still produce beneficial effects on reducing neighborhood violent crime when suffering under a weak labor market, we might want to introduce immigrants into economically deprived cities to control crime. Stakeholders and policymakers could increase immigrant political opportunities in these cities to attract immigrants, so these cities are more likely to retain the revitalization effect of immigration on violent crime. To ensure favorable outcomes, they can also consider deploying more resources to increase the quality of jobs or to support employment agencies for immigrants.

## Appendices

**Table 1. Descriptive Statistic of All Variables**

	<b>Mean</b>	<b>SD</b>	<b>Min.</b>	<b>Max</b>
<i>Tract Level (N = 8,931)</i>				
Violent Crime Count (1999 to 2001)	15.47	16.99	0.00	337.00
Property Crime Count (1999 to 2001)	216.90	187.70	0.00	3320.00
Immigrant Prevalence	0.00	0.96	-0.87	5.03
Percent foreign born	16.32	16.43	0.00	83.78
Percent recent immigrants	7.52	8.49	0.00	61.68
Percent linguistically isolated	7.70	10.71	0.00	72.99
Residential stability	0.03	0.87	-2.14	2.74
Neighborhood disadvantage	0.00	0.86	-1.66	3.70
Percent high school graduates	74.91	18.00	14.12	100.00
Percent female-headed households	17.04	11.86	0.00	96.06
Percent poverty	18.51	14.01	0.00	92.69
Jobless rate	33.89	13.13	5.01	90.95
Percent professionals	31.94	16.93	0.00	86.48
Percent low-wage jobs	18.52	9.03	0.00	82.48
Percent young males aged 15-34	15.87	5.75	0.00	55.92
Residential loans	21372.00	25316.00	0.00	521109.00
African American Neighborhoods	0.16	0.37	0.00	1.00
Latino Neighborhoods	0.08	0.27	0.00	1.00
Minority Neighborhoods	0.07	0.26	0.00	1.00
Integrated Neighborhoods	0.34	0.47	0.00	1.00
Spatial Lags for violent crime	48.80	38.30	0.00	354.00
Spatial Lags for property crime	68.39	51.47	0.10	740.46
<i>City Level (N = 87)</i>				
Labor Instability	0.00	0.91	-2.69	2.99
City population (per 100,000) at 2000	10.86	11.39	1.01	36.95
Percent manufacturing at 2000	11.94	4.05	1.53	25.86
Percent recent movers	51.94	5.40	31.93	66.52
Percent African American	24.05	17.99	0.53	81.02
Percent Hispanic	20.81	16.58	1.09	90.46
Percent foreign born	17.28	12.28	1.58	72.11
Percent young males aged 15-34	16.43	1.97	11.24	24.09
White-Black Dissimilarity at 2000	59.66	16.61	14.28	85.19
Midwest	0.06	0.23	0.00	1.00

South	0.32	0.47	0.00	1.00
West	0.30	0.46	0.00	1.00
Gateway (n=19)	0.49	0.50	0.00	1.00

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**Table 2. Operationalization of Variables**

Variables	Operationalization
<i>Dependent Variables</i>	
Violent crimes	Average annual number of reported murders and robberies in tract from 1999 to 2001
Property crimes	Average annual number of reported burglaries, larcenies, and motor vehicle theft in tract from 1999 to 2001
<i>Independent Variables</i>	
Tract Level (N = 8,931)	
Immigrant Prevalence ( $\alpha = 0.96$ )	Average of standard scores of the following three variables: Percentage of the total population that is foreign born Percentage of the total population that is foreign born and arrived in the United States in 1990 or later Percentage of the households in which no one age fourteen and over speaks English well
Residential instability ( $\alpha = 0.69$ )	Average of standard scores of the following two variables: Percentage of occupied housing units that are renter occupied Percentage of population ages 5 and over who lived in a different house in 1995
Disadvantage ( $\alpha = 0.93$ )	Average of standard scores of the following six variables: Percentage of civilian labor force age 16-64 who are unemployed or not in the labor force (joblessness) Percentage of employed civilian population age 16 and over in management, professional, & related occupations (reverse-coded in index) Percentage of adults age 25 and over who are at least high school graduates (reverse-coded in index) Percentage of households that are female-headed with no husband Percentage of employed civilian population age 16 and over employed in the six occupations with the lowest average incomes (low-wage jobs) Percentage of population for whom poverty status is determined whose income in 1999 was below the poverty level
City Level (N = 87)	
Labor Instability ( $\alpha = 0.79$ )	Average of the standard scores of two metropolitan variables: Percentage of employed civilian population age 16 and over employed in the six occupations with the lowest average incomes (low-wage jobs) Percentage of civilian labor force age 16-64 who are unemployed or not in the labor force (jobless)

**Table 3. HGLM Negative Binomial Models of Violent Crime with Robust S.E.**

	Violent Crime					
	Model 1		Model 2		Model 3	
	b	(SE)	b	(SE)	b	(SE)
<i>Tract-level (N=8,931)</i>						
Immigrant Prevalence	-.122**	(.034)	-.112**	(.034)	-.122**	(.034)
Residential Mobility	.283**	(.024)	.282**	(.024)	.282**	(.024)
Neighborhood Disadvantage	.344**	(.040)	.343**	(.041)	.342**	(.041)
% Young Male (15-34)	.005	(.003)	.006	(.003)	.005	(.003)
Residential loans	-.000**	(.000)	-.000**	(.000)	-.000**	(.000)
African American Neighborhoods	.262**	(.084)	.264**	(.085)	.256**	(.084)
Latino Neighborhoods	.196	(.111)	.198	(.111)	.201	(.112)
Minority Neighborhoods	.247	(.091)	.248**	(.091)	.246**	(.090)
Integrated Neighborhoods	.278**	(.047)	.279**	(.048)	.277**	(.047)
Spatial Lag	.010*	(.001)	.010*	(.001)	.010**	(.001)
<i>City-level (N=87)</i>						
Labor Instability	-	-	.028	(.061)	.029	(.061)
Immigrant Prevalence x Labor Instability	-	-	-	-	-.053**	(.018)
White-Black Dissimilarity	.016**	(.003)	.015**	(.003)	.015**	(.003)
% Manufacturing	-.015*	(.007)	-.061*	(.008)	-.016*	(.008)
City population	-.000	(.000)	-.000	(.000)	-.000	(.000)
% African American	.009**	(.002)	.008**	(.003)	.008**	(.003)
% Hispanic	.006	(.003)	.004	(.004)	.004	(.004)
% Recent movers	-.006	(.008)	-.005	(.008)	-.006	(.008)
% Foreign born	-.005	(.005)	-.004	(.005)	-.004	(.005)
% Young Male (15-34)	.005	(.020)	.004	(.020)	.004	(.020)
Midwest	.134	(.102)	.155	(.113)	.165	(.116)
South	.019	(.092)	.040	(.114)	.048	(.117)
West	.285**	(.108)	.290**	(.111)	.291**	(.113)
Constant	-7.266**	(.477)	-7.231**	(.481)	-7.169**	(.489)
Variance Components						
Immigrant Prevalence	.020**	(.005)	.019**	(.005)	.014**	(.005)
Intercept	.055**	(.011)	.056**	(.011)	.057**	(.011)

\*p < 0.05, two-tailed. \*\*p < 0.01, two-tailed.

**Table 4. HGLM Negative Binomial Models of Violent Crime with by Gateway Status**

	<b>Violent Crime</b>			
	<b>Gateway</b>		<b>Non-Gateway</b>	
	<b>b</b>	<b>(SE)</b>	<b>b</b>	<b>(SE)</b>
<i>Tract-level (N=8,931)</i>				
Immigrant Prevalence	-.116**	(.046)	-.133**	(.041)
Residential Mobility	.282**	(.040)	.258**	(.030)
Neighborhood Disadvantage	.300**	(.065)	.363**	(.044)
% Young Male (15-34)	.006	(.004)	.006	(.005)
Residential loans	-.000**	(.000)	-.000**	(.000)
African American Neighborhoods	.317*	(.154)	.239**	(.103)
Latino Neighborhoods	.253	(.154)	.178	(.102)
Minority Neighborhoods	.296*	(.133)	.275**	(.099)
Integrated Neighborhoods	.280**	(.076)	.278**	(.061)
Spatial Lag	.009*	(.002)	.011*	(.001)
<i>City-level (N=87)</i>				
Labor Instability	.073	(.134)	-.072	(.069)
Immigrant Prevalence x Labor Instability	-.081*	(.039)	-.046*	(.020)
White-Black Dissimilarity	-.024*	(.012)	.018**	(.003)
% Manufacturing	-.048*	(.021)	-.010	(.008)
City population	.000	(.000)	.000	(.000)
% African American	-.002	(.007)	.008*	(.003)
% Hispanic	-.009	(.008)	.008	(.005)
% Recent movers	-.087	(.057)	-.004	(.008)
% Foreign born	.008	(.007)	-.003	(.007)
% Young Male (15-34)	.037	(.081)	.008	(.020)
Midwest	.454**	(.155)	.076	(.122)
South	.435	(.381)	-.019	(.130)
West	-.002	(.207)	.330**	(.126)
Constant	-.518	(2.836)	-7.539**	(.509)
Variance Components				
Immigrant Prevalence	.009**	(.004)	.025**	(.011)
Intercept	.012**	(.004)	.043**	(.011)

\*p < 0.05, two-tailed. \*\*p < 0.01, two-tailed.

**Table 5. HGLM Negative Binomial Models of Property Crime with Robust S.E.**

	Property Crime					
	Model 4		Model 5		Model 6	
	<b>b</b>	(SE)	<b>b</b>	(SE)	<b>b</b>	(SE)
<i>Tract-level (N=8,931)</i>						
Immigrant Prevalence	-.137**	(.035)	-.119**	(.030)	-.120**	(.030)
Residential Mobility	.279**	(.022)	.225**	(.019)	.225**	(.019)
Neighborhood Disadvantage	.043	(.056)	.074	(.048)	.074	(.049)
% Young Male (15-34)	.008**	(.003)	.007**	(.003)	.007*	(.003)
Residential loans	-.000**	(.000)	-.000**	(.000)	-.000**	(.000)
African American Neighborhoods	-.069	(.076)	.035	(.088)	.035	(.088)
Latino Neighborhoods	-.024	(.089)	-.016	(.102)	-.016	(.102)
Minority Neighborhoods	-.039	(.105)	.040	(.087)	.040	(.087)
Integrated Neighborhoods	.091*	(.043)	.116**	(.041)	.116**	(.041)
Spatial Lag	.005**	(.000)	.005**	(.000)	.005**	(.000)
<i>City-level (N=87)</i>						
Labor Instability	-	-	.006	(.041)	.007	(.041)
Immigrant Prevalence x Labor Instability	-	-	-	-	-.003	(.017)
White-Black Dissimilarity	.006*	(.003)	.004	(.002)	.004	(.002)
% Manufacturing	-.008	(.006)	-.008	(.006)	-.008	(.005)
City population	-.000	(.000)	-.000	(.000)	-.000	(.000)
% African American	-.003	(.002)	-.000	(.002)	-.000	(.002)
% Hispanic	-.011**	(.003)	.008**	(.003)	.008**	(.003)
% Recent movers	.004	(.007)	.001	(.006)	.001	(.006)
% Foreign born	-.018**	(.004)	-.011**	(.003)	-.011**	(.003)
% Young Male (15-34)	-.011	(.022)	-.007	(.016)	-.007	(.016)
Midwest	.303**	(.076)	.208**	(.071)	.214**	(.070)
South	.226**	(.074)	.160*	(.074)	.164**	(.074)
West	.151	(.095)	.116	(.077)	.120	(.077)
Constant	-3.533**	(.370)	-3.507**	(.312)	-3.499**	(.311)
Variance Components						
Immigrant Prevalence	.028**	(.007)	.012**	(.004)	.012**	(.004)
Intercept	.045**	(.009)	.026**	(.006)	.026**	(.006)

\*p < 0.05, two-tailed. \*\*p < 0.01, two-tailed.

**Table 6. HGLM Negative Binomial Models of Property Crime with by Gateway Status**

	Property Crime			
	Gateway		Non-Gateway	
	b	(SE)	b	(SE)
<i>Tract-level (N=8,931)</i>				
Immigrant Prevalence	-.068*	(.034)	-.187**	(.040)
Residential Mobility	.216**	(.028)	.233**	(.025)
Neighborhood Disadvantage	-.014	(.078)	.154**	(.041)
% Young Male (15-34)	.005	(.005)	.009*	(.004)
Residential loans	-.000**	(.000)	-.000**	(.000)
African American Neighborhoods	.221	(.158)	-.088	(.079)
Latino Neighborhoods	.080	(.155)	.026	(.121)
Minority Neighborhoods	.164	(.146)	-.023	(.081)
Integrated Neighborhoods	.176**	(.064)	.059	(.046)
Spatial Lag	.006**	(.001)	.005**	(.001)
<i>City-level (N=87)</i>				
Labor Instability	-.083	(.093)	-.055	(.049)
Immigrant Prevalence x Labor Instability	.016	(.023)	-.024	(.022)
White-Black Dissimilarity	-.022**	(.006)	.004	(.003)
% Manufacturing	-.026*	(.013)	-.003	(.006)
City population	-.000	(.000)	.000	(.000)
% African American	-.015**	(.004)	.001	(.002)
% Hispanic	.003	(.004)	.013**	(.003)
% Recent movers	-.111**	(.028)	.003	(.007)
% Foreign born	-.004	(.004)	-.015**	(.005)
% Young Male (15-34)	.072	(.048)	-.004	(.021)
Midwest	.396**	(.119)	.165*	(.080)
South	.701**	(.221)	.080	(.080)
West	.176	(.166)	.025	(.089)
Constant	2.981*	(1.381)	-3.750**	(.372)
Variance Components				
Immigrant Prevalence	.006	(.003)	.021**	(.007)
Intercept	.004	(.002)	.027**	(.007)

\*p < 0.05, two-tailed. \*\*p < 0.01, two-tailed.

**Table 7. Sensitivity Analysis for Secondary Sector Low-wage Job**

	Violent Crime		Property Crime	
	b	(SE)	b	(SE)
<i>Tract-level (N=8,931)</i>				
Immigrant Prevalence	.150	(.109)	-.064	(.100)
Residential Mobility	.282**	(.024)	.225**	(.019)
Neighborhood Disadvantage	.342**	(.040)	.073	(.048)
% Young Male (15-34)	.005	(.003)	.007*	(.003)
Residential loans	-.000**	(.000)	-.000*	(.000)
African American Neighborhoods	.258**	(.084)	.034	(.088)
Latino Neighborhoods	.200	(.111)	-.015	(.102)
Minority Neighborhoods	.248**	(.090)	.040	(.087)
Integrated Neighborhoods	.278**	(.047)	.116**	(.041)
Spatial Lag	.010**	(.001)	.005**	(.000)
<i>City-level (N=87)</i>				
Low-wage Jobs	.010	(.017)	.005	(.012)
Immigrant Prevalence x Low-wage Jobs	-.016*	(.006)	-.003	(.006)
White-Black Dissimilarity	.015**	(.003)	.004	(.002)
% Manufacturing	-.017*	(.008)	-.009	(.005)
City population	-.000	(.000)	-.000	(.000)
% African American	.008*	(.002)	-.001	(.002)
% Hispanic	.004	(.004)	.007**	(.002)
% Recent movers	-.005	(.008)	.002	(.006)
% Foreign born	-.003	(.005)	-.010**	(.003)
% Young Male (15-34)	.002	(.020)	-.008	(.016)
Midwest	.150	(.108)	.213**	(.064)
South	.040	(.109)	.168*	(.073)
West	.286**	(.110)	.118	(.078)
Constant	-7.332**	(.533)	-3.558**	(.334)
Variance Components				
Immigrant Prevalence	.016**	(.005)	.012**	(.004)
Intercept	-1.077**	(.045)	-1.138**	(.048)

\*p < 0.05, two-tailed. \*\*p < 0.01, two-tailed.

**Table 8. Sensitivity Analysis for Joblessness**

	Violent Crime		Property Crime	
	b	(SE)	b	(SE)
<i>Tract-level (N=8,931)</i>				
Immigrant Prevalence	.154	(.110)	-.146	(.091)
Residential Mobility	.282**	(.024)	.225**	(.019)
Neighborhood Disadvantage	.343**	(.041)	.074	(.048)
% Young Male (15-34)	.005	(.003)	.007*	(.003)
Residential loans	-.000**	(.000)	-.000**	(.000)
African American Neighborhoods	.255**	(.084)	.035	(.088)
Latino Neighborhoods	.200	(.112)	-.017	(.102)
Minority Neighborhoods	.244**	(.090)	.040	(.086)
Integrated Neighborhoods	.275**	(.047)	.116**	(.041)
Spatial Lag	.010**	(.001)	.005**	(.000)
<i>City-level (N=87)</i>				
Joblessness	.002	(.011)	-.003	(.007)
Immigrant Prevalence x Joblessness	-.008**	(.003)	.001	(.003)
White-Black Dissimilarity	.016**	(.003)	.004*	(.002)
% Manufacturing	-.015*	(.007)	-.008	(.005)
City population	-.000	(.000)	-.000	(.000)
% African American	.008**	(.003)	.000	(.003)
% Hispanic	.005	(.004)	.009**	(.003)
% Recent movers	-.007	(.008)	.001	(.006)
% Foreign born	-.004	(.005)	-.011**	(.003)
% Young Male (15-34)	.005	(.020)	-.007	(.016)
Midwest	.162	(.125)	.189*	(.080)
South	.044	(.117)	.142	(.072)
West	.294*	(.116)	.109	(.078)
Constant	-7.261**	(.617)	-3.445**	(.389)
Variance Components				
Immigrant Prevalence	.015**	(.005)	.012**	(.004)
Intercept	-1.076**	(.044)	-1.138**	(.048)

\*p < 0.05, two-tailed. \*\*p < 0.01, two-tailed.

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